

### **ABSTRACT**

The present invention provides a transducer for converting between mechanical vibration and electrical signal, the transducer comprising a housing enclosing a substantially cylindrical permanent magnet and a coil, the magnet having a side-to-side polar orientation. The transducer  
5 may be used as sensor that is part of a sensor array for detecting vibrations from a hollow-bodied musical instrument and converting the vibrations into electrical signals for amplification.

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